



THE COMMONWEALTH OF MASSACHUSETTS
WATER RESOURCES COMMISSION

100 Cambridge Street, Boston MA 02114

Meeting Minutes for June 10, 2004

Members in Attendance:

Karl Honkonen	Designee, EOE
Marilyn Contreas	Designee, DHCD
Cynthia Giles	Designee, DEP
Gerard Kennedy	Designee, DAR
Mark Tisa	Designee, DFG
Joe McGinn	Designee, DCR
Joe Pelczarski	Designee, CZM
Matthew Rhodes	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Mike Gildesgame	DCR
Linda Marler	DCR
Michele Drury	DCR
Vicki Gartland	DCR
Sara Cohen	DCR
Ted McIntire	Town of Reading DPW
Peter Tassi	Town of Reading DPW
Bob Cutone	CDM
Kerry Mackin	IRWA
Eileen Simonson	WSCAC
Steve Garabedian	USGS
Martha Stevenson	League of Women Voters of MA
Zachary Crowley	RLO, State House of Representatives
Jeffrey Lafleur	CCCCGA
Martin Pillsbury	MAPC
Ryan Ferrara	MWRA Advisory Board
Dick Laramie	CDM

Agenda Item #1: Executive Director's Report

Marler provided an update on the hydrologic conditions:

- Rainfall for May was 100% of normal. Statewide for the water year, precipitation totals are at 105%.
- Ground water levels during May were largely normal. There is a small area in southeast Massachusetts and the Upper Cape that is below normal. This is because these areas received less rainfall in May (85% of normal).
- Streamflow was in the normal range during May.
- Reservoir levels are around normal, about 90% full.
- Fire danger is low

- Hurricane season started June 1st and extends through November 30th. Pelczarski added that a big concern is that there is a new generation in New England that has never experienced a major hurricane. In addition, there has been an enormous amount of coastal development since New England last experienced a major hurricane. Simonson asked if there was a vehicle to get hurricane information out to the general public. Marler and Pelczarski replied that MEMA holds an annual hurricane awareness week to disseminate this information to the public. This is coming up next week.

Honkonen gave the Executive Director's Report:

- Public members: Matt Rhodes and Gary Clayton have been nominated by the Secretary for reappointment. Formal swearing in has yet to happen. Karl will continue to remind the Governor's office that this needs to be done.
- Saturday was the 100th birthday of gaging stations in Massachusetts. Garabedian added that there was a ceremony at the Conte Anadromous Fish Laboratory at Turners Falls in the town of Montague. USGS, in cooperation with the State of Massachusetts, has been gaging Massachusetts streams for 100 years. This particular gage is 100 years old. It is a key gage in the state because it is on the Connecticut River. Garabedian stated that it has been a pleasure for USGS to be working with the Commonwealth for 100 years and he is looking forward to 100 more years.

Agenda Item #2: Vote – Minutes of February 2001:

V	A motion was made by McGinn and seconded by Contreas to approve the meeting minutes
O	of February 2001.
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E	The vote was six in favor with 2 abstentions.

Agenda Item #3: Presentation – Staff Recommendation on Reading's Interbasin Transfer Application to Join the MWRA Water Works System

Drury acknowledged Reading's representatives. Reading is applying for admission to the Massachusetts Water Resources Authority (MWRA) Water Works System to purchase up to 1.2 million gallons per day (mgd) to supplement its existing water supply sources. Reading has land area in the Ipswich River basin, the Mystic River subbasin of the Boston Harbor basin and the North Coastal basin. The Town has nine existing water supply sources in the Ipswich River basin. Estimated capacity for these sources is 8.36 mgd. Reading has determined that use of its sources during certain times of the year causes impacts to the Ipswich River and is proposing to purchase water to supplement its existing water supply sources during these periods. The MWRA Water Works System's sources are located in the Chicopee River basin and the Nashua River basin. The application was evaluated against the eight criteria outlined in the regulations, as well as the Interbasin Transfer Act Performance Standards. Consideration was given to comments received through the public comment process.

Staff is recommending that the WRC approve this application. Drury stated that she would leave discussion of compliance with criteria 2, 5, and 8, for last, as a lively discussion was anticipated.

Criterion #1, MEPA: The application was part of the DEIR for this project. Most of the responses to our request for additional information were provided in the FEIR. The Secretary's Certificate on the FEIR was issued on October 31, 2003.

Criterion #3, Conservation: Reading's water conservation program meets all of the 1992 Water Conservation Standards for the Commonwealth of Massachusetts and most of the 1999 IBT Performance Standards for Criterion #3. Reading does not meet the Performance Standard for retrofitting all public buildings or for having a mechanism in its drought/emergency plan to tie water use restrictions to streamflow levels; however, the Performance Standards acknowledge that in certain cases, local conditions may prevent a proponent from meeting a standard. Retrofit programs were identified as a priority through the 2001 water audit. Because of the way projects are funded at the town level, these programs are just now underway. Most are scheduled to be completed by mid-August 2004. All public buildings, with the exception of the high school, will have been retrofit by September 30, 2004. The High School will be undergoing a total renovation. The contract for this project was awarded in May 2004. As part of this renovation, all plumbing fixtures will be replaced with low flow devices. The renovation is scheduled to be completed by June 2007. Reading has a by-law that outlines a set of increasingly stringent water use restrictions and gives the Town the ability to implement mandatory water use restrictions, but it is based on water supply indicators, not on streamflow levels, as required by the Performance Standards. Streamflow information is available in the Ipswich River basin. Staff notes that the current restrictions are indirectly tied to an environmental indicator. Although Reading does not meet the "letter" of this Performance Standard, it does meet the "spirit" of the Standard.

Reading has also instituted a four-year, \$1 million water conservation program to take its existing program over and above what it is currently doing. This is expected to save 190,000 gpd. The WRC was referred to page 7 of the staff recommendation for more detail on this program.

Staff recommended that if this application is approved, Reading should be required to provide documentation that the retrofit programs have been implemented and amend its drought plan to tie restrictions to streamflow levels.

Criteria 4 and 6 are not applicable to this proposal. Criterion #4 refers to surface water sources in the receiving basin. Reading has groundwater sources and so is not required to have the surface water forestry management plan. Criterion #6 refers to groundwater sources used for the transfer. MWRA's sources are surface water.

Criterion #7: The Draft Local Water Resources Management Plan was sent to the WRC with this month's meeting. This was submitted with Reading's Interbasin Transfer Act application. The Plan addresses the issues identified in the 1999 Interbasin Transfer Act Performance Standards Appendix B Local Water Resources Management Plan Outline. Therefore Staff recommends that the WRC approve Reading's Local Water Resources Management Plan and will be requesting a vote to approve the plan in August. This plan must be approved by the WRC and adopted by the community in order to join the MWRA water works system. It is also needed for some DEP grant programs.

Criterion #2, viable local sources: As stated, Reading has nine existing water supply sources in the Ipswich River basin, with an estimated capacity of 8.36 mgd. Their current use is about 2

mgd and they are registered for 2.57 mgd. Reading's sources, and most of its undeveloped area, are in the Ipswich River basin. It is doubtful that any new source developed in the Ipswich basin would meet permitting requirements. Any source Reading develops in town would be subject to the Interbasin Transfer Act because the town is sewered to the MA Coastal Basin via the MWRA sewer. Nevertheless, Reading did explore for in-town sources, however they were unsuccessful. They looked in the other basins in town and could find no suitable locations for high-yielding wells. In addition, some portions of town are in the headwaters of the Saugus River, which has also historically experienced low flow problems during summer months. Marler reminded the WRC of the presentation given about a year ago, on the Saugus River low flows

Regarding existing sources in the Ipswich River Basin, Reading is proposing to reduce use of its existing sources, even though they have ample capacity to meet current and future demands because the town recognizes that use of the wells during low flow times of the year contributes to environmental degradation within the Ipswich River. DEP commented that, even under the current water use (not full capacity), the portion of the river at Reading's streamside wells is the most impacted stream segment and that during the summer period, the river frequently dries up here.

Reading is proposing to restrict use of its wells for the months of May through October to no more than 1 mgd. This represents about half of the town's current demand. For the balance, they would purchase water from the MWRA. Staff's charge, under the Act, was to determine if these sources were viable, or not, during this time period, keeping in mind that the Act was designed to protect the donor basin, not to restore environmental conditions in the receiving basin. However, the regulations define a "viable source" as one "which can be used while preserving reasonable instream flow as determined by the same criteria provided to evaluate impacts on the donor basin". USGS has found that ground water withdrawals substantially decrease the magnitude, and increase the duration and frequency of low flows in the Ipswich River. DEP has also studied the river. Reading alone does not cause the problems in the Ipswich. One test used to determine if these sources were viable as currently operated was, if these wells were to come before the WRC for ITA approval, would unrestricted use be allowed. The answer, obviously, is no. Staff asked Reading to conduct an analysis demonstrating the impacts on the river from using these wells and from restricting them, during May through October.

Marler stated that Reading's capacity and WMA registration greatly exceeds their demands. There are issues with the town's wells. The wells are vulnerable to contamination. Route 93 runs north/south to the west of these wells. In 1992, the wells were compromised by a gasoline spill on this highway, causing some wells to be shut down. There are also contamination sources north of the river in Wilmington. Two of the wells' Zone I areas overlap the highway. The problems with the Ipswich River are well known. The WRC has designated the Ipswich river basin as stressed. The USGS studies show that ground water withdrawals in the headwaters of the basin are causing impacts to the river. DEP has stated that continued use of the wells at existing levels during low flow periods is not a viable option. Reading conducted an analysis for different scenarios involving use of its wells. There was almost no difference in using the wells at 1 mgd or tying use of the wells to streamflows, which would be a more difficult situation for the town, operationally. They are proposing to supplement their water use with MWRA water. They are also discussing modification to their registration with DEP. This should help to restore Ipswich River low flow.

Criteria #5 and #8: Marler continued to discuss impacts to the donor basin. MWRA's water comes from the Quabbin Reservoir in the Chicopee River basin and the Wachusett Reservoir in the Nashua River basin. Quabbin has a 400 billion gallon capacity and discharges to the Swift River. The MWRA has mandated releases that govern the operation of the Quabbin Reservoir. These are measured at Bondsville, downstream of the Winsor Dam. The requirement is for 20 mgd (30 cfs) to be released. MWRA is also required to supplement the Connecticut River when flows are low, from June through November. Winsor Dam releases are made through a by-pass. Also, spills occur over the crest of the dam. They are avoided for a number of reasons, but during the spring months, spills still occur. In the late spring this can be problematic downstream because of flooding issues and the fish hatchery, which relies on cold water from the river. The Ware River can also be diverted into the Quabbin Reservoir for flood control purposes or during drought periods. These are only allowed when Ware flows exceed 85 mgd and can only occur between October and June. Wachusett Reservoir also has required releases. These are: 12 million gallons per week (1.71 mgd). The releases are made through a fountain, and uncontrolled releases rarely occur.

The hydrologic analyses conducted to support the Interbasin Transfer application were included in the EIR. These were based on West Ware gage on the Swift River. The years 1990 to 2000 were used for the analyses, because MWRA demand over time peaked in the 1980's. Due to the demand management programs implemented in 1980's, demand has decreased and the 10-year period looked at for the application is considered to be most representative of current conditions. Reading looked at current and future demands on the MWRA system, including new communities and potential customers. The Swift River was impacted by the construction of the Quabbin Reservoir. In the future, uncontrolled spills will be reduced by 20% on average, but Reading's impact is not significant. The reason there will be an average 20% reduction is because of two years when there was no or minimal spills. When this is looked at year by year, it does not appear too significant.

MWRA did a drought analysis, which showed that the Quabbin Reservoir pool descent with the proposed Reading demand will remain well above the threshold of 470 feet elevation. There would be two more months during the 52 years looked at, where a drought condition would have been triggered with Reading, compared with current condition. Without a recurrence of the 1960's drought, there would be no increase in drought levels; with the 1960's drought and future demand, there is only a two-month difference. Staff felt this was not very significant.

The judgment of staff is that impacts to stream flow will be minimal, compared to existing conditions, however, existing conditions represent an impacted environment. The high streamflows on the Swift River have been reduced, but the summer low flows are augmented with cold-water releases. In the Stoughton decision, for its application to join the MWRA, the WRC directed MWRA to evaluate potential improvements to the Swift River flow prior to accepting another community as a member. They have been working on that. The Swift River has one of the only cold-water fisheries in the state. DFW has a trout hatchery downstream of the Quabbin Reservoir, which has an intake to the Swift River for most of its water supply. This is the largest trout production facility in the state. DFW has felt that releases in the past have not been optimum, but they feel that the warm water spills have been harmful to both the fish within the stream and within the hatchery. DFW would prefer controlled increased flows rather than spills. Highly cyclic flows should be avoided.

A proposal has been made that if the Quabbin was filling at an acceptable rate over the winter and spring months, alternative releases could be implemented. The parties (MWRA, DFW, and DCR)

want to come to an agreement to increase controlled releases using the bypass and possibly other improvements could be made in the future. Spring spills should be avoided, if possible. The Quabbin could be supplemented with diversions from the Ware River, if needed, to help affect releases to the Swift. Similarly, the summer releases from the Winsor Dam could be diminished or reduced if flow targets downstream at Bondsville are being maintained.

Before the Quabbin Reservoir was built, the Swift and Ware Rivers behaved similarly. Since the construction of Quabbin, the Ware River's hydrograph still exhibits its old characteristics, but the Swift River's hydrograph is flat at a much reduced rate through the winter months. A return of the more natural hydrograph of the Swift River is desired. However, the bypass limits this.

Drury stated that issues raised during the public comment period discussed "approved uses" under the ITA and implied that Reading's application is not one of them. The Commission has previously discussed this. *Staff want to emphasize* that the ITA does not set out "approved uses". It requires any transfer of water or wastewater, for any reason, to be approved by the WRC. There are no thresholds and there are no restrictions on what the water can be used for listed in the Act or regulations. The Act and regulations only require that the water is used efficiently. Staff feels that if an application for interbasin transfer meets the criteria for approval, then Staff must recommend approval under the Act. Staff is not making any judgment on whether Reading should be doing this or not. The town has recognized a need in the receiving basin and they have proposed a way to address this problem. Staff feels that the application meets the criteria of the Act and thinks that this action will help the Ipswich. But benefit to the Ipswich is not the issue before the Commission. The WRC's responsibility is to assure that this transfer can be done in a way that does not damage the donor basin, and as the WRC just heard, Staff thinks it does.

Comments: McIntire stated that Reading appreciated the recommendation of the Staff. Simonson stated the MWRA has done a lot of repairs to the Wachusett Dam, so that now the Nashua River is receiving more flow downstream, but WSCAC still has concerns relative to the Swift River. Summer flows are being driven by fishery needs. They have concerns about the quality of the Chicopee River. There is no portion of the Connecticut River below Holyoke that meets its classification, so WSCAC would like more releases from the Quabbin. The Secretary's Certificate required coordination between towns in the upper Ipswich basin and although Simonson understands that Staff will not hold up applications while waiting for other towns to act, the town of Wilmington will be coming in, and not just for 1 mgd, but for 1.5 mgd and it is likely that DEP will declare all their sources contaminated and they'll be getting 3-5 mgd from the MWRA within the next year, so WSCAC doesn't see why Reading can't be doing something else in the meantime. DEP, in its comments, asked the WRC to expand the triggers of streamflow to all nonessential water uses during the summer, not merely to the drought plan, as Staff has recommended. WSCAC thinks that the proposed river triggers for operation of the Reading system, whenever it gets its new treatment facilities up and running, would help enhance the river and should be expanded to all summer water uses. The proposed plan is focused primarily on river triggers for the drought and emergency plan, not for seasonal operation. Simonson feels that the bedrock well situation has not been fully explored and consideration should be given to public lands as potential areas for development for new water supplies in urban areas. She objects to the proposal that the Ware River be used to supplement the Quabbin under any scenario, because it is the least of the water sources in the MWRA system. WSCAC wants MWRA to reduce use of this source because of water quality considerations. The Local Water Resources Management Plan is dated September 2002. It has not

been updated. Reading has done a lot and so Simonson thinks that this should be updated before the WRC approves it.

Mackin stated that the Ipswich River Watershed Association supports Reading's application, but feels that the amount of water proposed to be purchased will not alleviate the flow situation in the Ipswich River to the extent that is needed. She said that USGS suggested that a 50% reduction in withdrawals would result in a modest increase in flow below the Reading wellfield, whereas if there were no seasonal withdrawal of flows, regulated on a flow trigger, there would be a more dramatic improvement in flows. The Staff Recommendation does not require the same stringency that the Water Management Act permits require. This seems unfair in that other communities are required to do more in terms of water conservation. Mackin would like to see a requirement that pumping from the Ipswich sources cannot be unlimited, once the requested interbasin transfer amount is reached. A seasonal cap should be incorporated into the ITA approval. IRWA differs with WSCAC on bedrock wells. They would be opposed to the development of bedrock wells in the Ipswich River basin. Mackin would like a water offset provision for any new demand to assure that the gains made in terms of water conservation are not lost to growth and development.

Proposed Conditions

Drury went over the conditions of the recommendation and said that they address many of the issues that have been raised, but some of these issues are beyond the jurisdiction of the ITA. Under Criterion #2, it is required that Reading limit use of its existing local sources to no more than 1 mgd (total) during the months from May through October. If after the new water treatment plant is on-line in Reading, an alternative withdrawal scenario is proposed, Reading must consult with WRC Staff to determine if this meets the requirements of this Interbasin Transfer Act approval. Annual reports must be sent to WRC staff, detailing how much water was pumped from its own sources and how much water was purchased from the MWRA.

Under the conservation requirement, continuation of the water conservation program is required. As discussed earlier, this plan meets all of the water conservation standards and most of the performance standards. The annual statistical reports are required to be sent to WRC staff to demonstrate that the Town is continuing to meet unaccounted-for water and residential gpcd targets. If water use increases in these categories, Reading will need to come back with a plan to reduce water use. The drought/emergency plan must be revised to tie water use restrictions to streamflow levels in the Ipswich. This was requested by DEP and reflects DEP's WMA restrictions. Under the ITA, the Commission can only require that Reading complies with the ITA criteria and performance standards. We can't make Reading shut off their Ipswich basin wells. Documentation that the retrofit program has been completed is also required, as are detailed annual reports on the water conservation actions taken as part of the four-year, \$1 million program.

Drury added that Reading is taking a pro-active position on the problems of the Ipswich River. This is not going to solve all of those problems. But it is a start. Simonson said that WSCAC disagrees with many aspects of this proposal, but they agree that whatever is done must show up in the river. WSCAC still think that this is not a timely proposal. The headwater basin coordination is not happening yet. Giles added that Reading has agreed to modify its registration to reflect the conservation requirements of this decision. DEP will continue to work with Reading on this and expects the issue to be resolved prior to the WRC vote on the application.

Gildesgame added that there was going to be a public hearing in Reading on the Staff Recommendation on June 23rd.

Agenda Item #4: Presentation – Proposed Amendments to 310 CMR 36.00, The Water Resources Management Program

Giles proposed that this be more fully discussed at the July meeting when more staff will be available. Garabedian asked if there was a deadline for comments on the proposed amended regulations. Would the discussion in July be timely? Giles said that there would be plenty of time to comment on the proposed amendments. There is not a deadline for comments set at this time. Kennedy asked if the draft that was sent with the June package would change before the July discussion, and Giles answered no. Laramie asked about the process to implement the proposed amendments. Giles responded that as with any proposed regulatory amendments, there would be a public comment period. There will be notices in the Environmental Monitor and the normal public notice process. This is expected to happen in July.

Zimmerman asked if the WMA Advisory Committee was done with its work and if these are supposed to be temporary until the WMA Advisory Committee develops new revisions. Giles said that the Advisory Committee's work will be ongoing. Zimmerman asked if the Advisory Committee had a chance to look at these amendments and comment on them, and Giles answered no. Will they? Yes. Giles continued that DEP is in the process of recommending candidates for appointment to the WMA Advisory Committee. Names have been sent to the Governor's office, but there haven't been any official decisions yet, but the Department's proposed nominees have met.

Zimmerman said that the timing for these amendments seem strange. The process is starting before the group that is supposed to look at these things has been appointed. Giles said that DEP needs to proceed with the regulatory decisions that must be made while the more complex policy discussions are going on. This is why these amendments are being proposed now. DEP wants to have a fuller discussion of this next month because some people felt that they did not get adequate notice for this month. There will also be another meeting of the WMA Advisory Committee next month. Gildesgame asked Zimmerman if his concern was about getting adequate public input into this process. Zimmerman replied that there is a specific group that has been appointed to look at the WMA, its regulations and policies. He thinks that it is premature to propose changes before this group is in place. Giles answered that if DEP was proposing substantive changes, she would agree. But all that is being done is replacing the regulatory definition of safe yield with the statutory definition of safe yield. The definition in the Act should control what's in the regulations. DEP doesn't view this as a brand new change. If it was, more discussion would be needed. A vote will not be requested at next month's meeting. Tisa asked if the WRC's vote would come before the public hearings. Giles answered that public hearings will happen before WRC vote. Laramie asked about the final approval. Giles said that it will come from the Commissioner of DEP.

Meeting adjourned

Meeting minutes approved 12/9/04